

# Integrated Literature Review of Depression in Elderly People

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## Abstract

The authors conducted a literature review of the depression findings of systematic reviews and meta-analyses in elderly people. The defining characteristics of depression in elderly people include 2-5 symptoms, namely sleep disorders, changed weight, psychomotor retardation, fatigue, and feelings of worthlessness or guilt within 2 weeks; the critical symptom is either low mood or loss of interest in usual activities. In addition, elderly people with an abnormal status for the items of the Geriatric Depression Scale (GDS) may have experienced recurrent falls twice during the past 2 years. The related factors of depression in elderly people include demographic, physical, psychological, mental, and social factors. Colasanti et al. in 2010 identified four major self-rating depression scales for elderly people: Beck Depression Inventory (BDI), Self-rating Depression Scale (SDS), Center for Epidemiological Studies Depression (CES-D), and GDS. CES-D is a valid scale that can be used to distinguish major depression from emotional disorders among elderly people, and it can also be used in pharmacological trials. The interventions for depression in elderly people include pharmacological and nonpharmacological methods. Regarding pharmacological treatment, the evidence-based literature has demonstrated that duloxetine taken for 8 weeks can alleviate recurrent major depression in elderly people; at the same time, healthcare professionals should pay attention to some side effects. Moreover, herbal medicine has been found to only alleviate post-stroke depression in elderly people. Nonpharmacological interventions are exercise therapies such as yoga; alternative therapies such as touching, intimate massage, music, art, and nature; and cognitive therapy, reminiscence therapy, and psychotherapy.

**Keywords:** Depression; Elderly

## Introduction

According to the World Health Organization (WHO) report by 2020, depression will be the second leading cause of disability worldwide; currently, depression is very prevalent in developing countries; globally, the second leading cause of disability is depression. Studies have shown that currently, 30% of elderly people aged more than 65 years have emotional disorders, and 64% of hospitalized elderly people have depression symptoms such as low mood, sleep disturbance, poor appetite, or pain combined with anxiety [1-5]. Additionally, 36.9% of 111 elderly patients experienced depression, and the prevalence was 45.7%, 36.2%, and 22.2% in those living in nursing homes, intermediate care facilities, and domiciliary care facilities, respectively [6]. Specifically, 21.7% of 152 veterans developed depression [7]. Moreover, 34.9% of community-dwelling elderly veterans in the Yunlin-Chiayi area exhibited depression symptoms; this prevalence rate was higher than that for other communities in Taiwan [8].

Depression exerts severe effects in elderly people, including physical and psychological symptoms and social functioning disorders. Based on research findings accumulated over many years, elderly people with mild, early-diagnosed, and relapsed depression exhibit a high risk of dementia [5]. Furthermore, systematically reviewed the literature on the association of depression symptoms with recurrent falls among the elderly population and demonstrated that elderly people with an abnormal status for four items of the Geriatric Depression Scale (GDS) had experienced recurrent falls twice during the past 2 years [9]. Overall, the depression symptoms and disorders influence their health and are the major factors causing a high risk of suicide; thus, depression represents a heavy burden on the family and society [3,4,8].

## Purpose of the Study

The purpose of this study was to conduct a literature review of the depression findings of systematic reviews and meta-analyses in elderly people.

## Methods

The authors used key word “depression”, “elders”, and systematic reviews” or meta-analysis” in the CINAHL database from 2010 to 2016.

The 22 articles were identified with the extra 4 articles being indicating as the important papers; therefore, the final 26 papers were integrated to be reviewed.

## Findings

The findings included the defining characteristics, related factors, assessment scales, and interventions for depression in elderly people.

## Defining characteristics of depression in elderly people

According to the diagnostic and statistical manual of mental disorders, fourth edition, people experiencing 2 to 5 symptoms, including low mood and loss of interest and pleasure in usual activities, within 2 weeks are diagnosed with mild depression [10]. The diagnostic criteria for depression are the same for adults and elderly people; that is, for 2 weeks, at least five symptoms occur, including low mood, loss of interest in usual activities, lethargy or insomnia, gained or lost weight, psychomotor retardation, fatigue, feelings of worthlessness or guilt, suicidal ideation, or decreased concentration, but one critical symptom must occur: either low mood or loss of interest in usual activities [5]. Additionally, the diagnostic criteria for depression as low mood, loss of interest and pleasure, insomnia, fatigue, discontinued activities, and feelings of worthlessness and despair [4]. Furthermore, elderly people with an abnormal status for four items of GDS had experienced recurrent falls twice during the past 2 years, and these people were found to exhibit depression [9]. Finally, sleep disturbance as the most frequent symptom of depression in elderly people [11].

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## Related factors of depression in elderly people

The related factors of depression in elderly people include demographic, physical, psychological, mental, and social factors. Demographic factors such as age, gender, marital status, religion and faith, educational level, occupation, economic status, living patterns, hospitalization duration, and changed environment are all related to depression in elderly people [1,7,8,11]. Physical factors such as acute myocardial infarction, heart failure, stroke, cerebrovascular accident, hypothyroidism, crippling and/or disabling diseases, dementia and neurodegenerative diseases, bone fractures, osteoporosis, arthritis, and chronic illness; dysfunction in physical attributes, such as blood sugar and cardiovascular system imbalance, hydroelectrolytic disturbances, or lower liver and kidney functions; and lower daily activity score are related to depression in elderly people [1-3,6,7,10].

Specifically, among the elderly population, early depression is caused by family history, and late depression is caused by degenerative lesions in the white matter in the brain or brain vascular infarction [5]. Additionally, bad habits such as smoking and drinking and a self-perceived poor health status are also related to depression in elderly people [7,8]. Psychological, mental, and social factors related to depression in elderly people include a history of general anxiety, specific phobia, compulsive behaviors, major depression, feelings of loneliness and lack of intimacy in relationships because of living in long-term care facilities without sufficient support, mental senescence, lost role or role changes because of deaths of family members or retirement, and social difficulties [2,3,10,11].

## Assessment scales of depression in elderly people

Systematically reviewed assessment scales for depression in elderly people and identified four major self-rating depression scales for elderly people: Beck Depression Inventory (BDI) [2,12], Self-rating Depression Scale (SDS) [2,13], Center for Epidemiological Studies Depression (CES-D) [2,14], and GDS [2,15]. BDI consists of 21 items and evaluates the behavioral symptoms of depression. However, it is not sensitive to clinical variation and is thus not used in pharmacological trials. SDS consists of 20 items and is the main scale used to assess general depression in adults; it is used for false positive screening for seniors aged more than 70 years [2]. Furthermore, CES-D consists of 20 questions and distinguishes between clinical depression and emotional disorders in elderly people; GDS consists of 30 items and is a valid screening scale for major and minor depression; however, the scale for minor depression is not used in pharmacological trials [2].

## Interventions for depression in elderly people

The interventions for depression in elderly people include pharmacological and nonpharmacological methods. From the pharmacological perspective, three stages of medical treatment for depression in the elderly population: the acute stage, the relapse stage, and the prevention stage [16]. The purpose of the first stage is to alleviate the symptoms, the second stage aims to maintain healthy function, and the third stage prevents the recurrence of depression [16]. However, at the same time, healthcare professionals should assess the chronic illnesses of patients using depression medications and their past depression symptoms and medications in terms of categories, doses, and side effects [16]. Specifically, duloxetine taken for 8 weeks can alleviate recurrent major depression in people aged 65 years or older with major depressive disorder, but it also increases the risk of side effects such as thirst, constipation, diarrhea, and dizziness [17].

Additionally, systematically reviewed 298 potentially relevant

studies and selected 13 randomized controlled trials (RCTs) with fitting the inclusion criteria to analyze the efficacy and safety of Gan Mai Da Zao (GMDZ) decoction for depression [4]. Results identified that compared with anti-depression medicines, herbal medicine (Gan Mai Da Zao decoction) only alleviates post-stroke depression in elderly people; however, it could not provide evidence for major depression, post-surgical depression, or depression in the elderly in terms of the superiority of GMDZ decoction over anti-depressant therapies [4].

From the nonpharmacological perspective, systematically reviewed 461 clinical trials and reported that exercise therapy decreases the depression symptoms of elderly people and improves their self-esteem and quality of life [18]. Similarly, regular exercise could prevent the depression symptoms of 585 community-dwelling elderly people in Taiwan, regardless of gender, health status, and chronic illness [1]. Specifically, a systematic review showed that yoga could significantly reduce the depressive symptoms of elderly participants and improve their quality of sleep after 6 months both for elders living in institutions and the community [11]. Moreover, yoga exercises significantly decreased depression, sleep disturbance, and daytime dysfunction in 38 elderly people after 6 months, and these outcomes were more favorable than those of the control group of 31 elderly people [19].

## Discussion

Alternative therapies are also effective for treating depression symptoms in elderly people. Regarding physical contact therapy, the depression and agitated behaviors of 12 older people with dementia significantly improved after they received robot-assisted therapy involving PARO for 40 minutes, twice a week for 4 weeks; simultaneously, their verbal and body interactions were facilitated by nurses [20]. Similarly, 15-day intimate massage including head, neck, shoulders, hands, palms, fingers, and back could reduce depression and anxiety in 6 elderly people living in institutions [21].

Regarding music therapy, hospitalized elderly patients who listened to music for 30 minutes once a day during days 3 to 7 at a medical center had significantly reduced depression as well as smooth the heart rate and blood in the experimental group (N=36), comparing with the control groups (N=33) [3]. Regarding art therapy, 29 elderly patients who participated in 1-hour sessions of 12 artistic activities for 6 weeks, twice a week, showed significantly reduced depression and improved self-esteem [22]. Regarding nature therapy, the evaluating 10 elderly patients living in a nursing home who underwent a 10-week program of indoor horticultural therapy, with one 1.5-hour session per week; they reported that depression and loneliness in these patients significantly improved, along with improvements in the four positive themes of social connection, anticipation and hope, sense of achievement, and companionship [23].

Furthermore, regarding cognitive therapy, the assessing 23 elderly people with dementia who underwent individualized learning therapy for 30 minutes, twice a week; they showed that this therapy significantly improved cognitive functions and decreased neuropsychiatric symptoms such as hallucinations, depression, apathetic expression, irritability, bizarre behavior, and sleep disorders by the seventh week [24]. Similarly, in a meta-analysis, the reminiscence therapy significantly improved depression, self-esteem, and life satisfaction in 852 elderly people [25]. Finally, regarding psychotherapy, a meta-analysis of 17 trials; they reported a medium effect size of psychotherapy for decreasing depression symptoms in elderly people, and the effect was maintained at follow-up [26].

## Conclusion and Suggestions

According to the integrated review, the defining characteristics of depression in elderly people include 2 to 5 symptoms, namely sleep disorders, changed weight, psychomotor retardation, fatigue, and feelings of worthlessness or guilt within 2 weeks. The critical symptom is either low mood or loss of interest in usual activities. Moreover, elderly people with an abnormal status for the items of GDS may experience recurrent falls twice during the past 2 years. The related factors of depression in elderly people include demographic, physical, psychological, mental, and social factors. Four major self-rating depression scales for elderly people, including BDI, SDS, CES-D, GDS, and CES-D is a valid scale that can be used to distinguish major depression from emotional disorders among elderly people, and it can also be used in pharmacological trials. The interventions for depression in elderly people include pharmacological and nonpharmacological methods.

Regarding pharmacological treatment, the evidence-based literature has demonstrated that duloxetine taken for 8 weeks can alleviate recurrent major depression in elderly people; at the same time, healthcare professionals should pay attention to some side effects. Moreover, herbal medicine (Gan Mai Da Zao decoction) only alleviates post-stroke depression in elderly people. Nonpharmacological interventions are exercise therapies such as yoga; alternative therapies such as touching, intimate massage, music, art, nature, as well as cognitive, reminiscence, and psychotherapy. Based on the literature review findings, the authors recommend that future studies should develop a comprehensive depression assessment scale for elderly patients that include the related factors and defining characteristics of depression in elderly people. Based on the evidence-based literature, more nonpharmacological interventions should be administered to elderly patients with depression to improve their quality of life.

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